REMARKS/ARGUMENTS

By this Amendment, claims 1, 3-5 and 10 have been amended and claims 2, 6, 8 and 9 have been canceled. No new claims have been added to the application. Accordingly, claims 1, 3-5, 7 and 10 are pending in the application. No new matter has been added.

In the prior Office Action, the Examiner issued an Election/Restriction requirement upon concluding that the application contains claims directed to more than one species of the invention. By this Amendment, applicant hereby affirms the provisional election to prosecute the invention of species I (which requires that the composite be in the form of particles prior to being contacted with the supercritical fluid) and species III (which requires that the composite particles be in a fluidized bed when contacted with the supercritical fluid). Original claim 2 corresponded to species I and original claim 4 corresponded to species II. By this amendment, the subject matter originally set forth in claim 2 has now been incorporated into claim 1. Thus, all pending claims (i.e., claims 1, 3-5, 7 and 10) now read on elected species I, and claim 1 is thus deemed to be generic. Claim 4 is the only claim that reads on elected species III. Claim 5, which depends from claim 2, is the only claim that reads on a non-elected species, namely species IV (which requires that the composite particles be suspended in a solvent that is not soluble in the supercritical fluid when contacted with the supercritical fluid). It is applicant's understanding that claim 5 will be entitled to consideration upon allowance of claim 2.

Also in the prior Office Action, the Examiner rejected claim 9 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. The Examiner noted that original claim 9 impermissibly purported to depend from itself. By this amendment, claim 9 has been canceled thereby rendering the prior rejection thereof moot.

The Examiner also requested clarification regarding what was meant by the term "volume diameter" in claim 9. The term "geometric volume diameter" is now incorporated in claim 1 and thus clarification is provided. The term "geometric volume

diameter" is well-known to those having ordinary skill in the art. The term refers to the volume-weighted geometric mean diameter of the particles, and is typically used to report the size of particles used in pharmaceutical applications. To determine the geometric volume diameter of a particle, the average volume of the particles is first calculated and then the mean size of the particles is derived from the average volume distribution. This method of measuring particle size is biased by particles having larger volume or greater mass, which is important for pharmaceutical applications where a narrow size distribution of particles and an absence of large particles is often most desirable. Geometric volume diameter differs from a simple numerical mean or average diameter, which is biased by the number or numerical count of the particles rather than the average volume distribution thereof.

In the prior Office Action, the Examiner rejected claims 1-4, 7, 8 and 10 under 35 U.S.C. §102(b) as being anticipated by Daitch et al., U.S. Pat. No. 6,447,991 B1. Applicant notes that claims 2 and 8 have been canceled thereby rendering the prior rejection thereof moot. However, in view of the amendments made herein, and for the reasons set forth below, applicant respectfully requests reconsideration of the rejection of claims 1, 3, 4, 7 and 10.

Daitch et al. discloses a "smart aerogel" combined with a bio-aerosol receptor that has the ability to bind to specific bio-aerosols (see col. 1, lines 55-57). Bio-aerosols include, for example, bacteria, viruses, toxins and other biological materials generally having a particle size within the range of 0.01 to 10 μm (see col. 1, lines 39-42). The "smart aerogel" according to Daitch et al. is formed by sol-gel process in which a solution of silicate monomer undergoes polymerization to form a solid silicate network that is "soaking" in an alcohol (see col. 3, lines 4-14). Removal of the alcohol, typically by supercritical drying, results in the production of a low density, highly porous silica aerogel material (see col. 3, lines 14-17). The aerogel material is not in particle form, but rather it is in the form of a delicate open-cell sponge or matrix. Daitch et al. teaches a process whereby the aerogel is doped with a bio-aerosol receptor that possesses the ability to bind to specific bio-aerosols (e.g. sialic acid, which can bind with the influenza virus). Once a bio-aerosol has been captured by the aerogel according to Daitch et al.,

the aerogel can be contacted with water, which causes it to disintegrate. The captured bio-aersol can be analyzed and identified from the resulting solution.

In the Office Action, the Examiner appears to confuse the aerogel disclosed by Daitch et al. with the bio-aerosols that the aerogel disclosed by Daitch et al. can be used to capture. The aerogel according to Daitch et al. is not in particulate form, but rather takes the form of a sponge or filter matrix that can be used to trap and capture bio-aerosol particles such as bacteria, viruses, toxins and other biological particles. Furthermore, the Examiner appears to confuse the concept of pore size with particle size (see, e.g., Office Action at p. 5, section c, wherein the Examiner states that "Daitch et al. discloses that the 'smart aerogel' of the invention has a complex pore structure with discrete ranges from 2 nm to 100 nm (column 1, lines 62-64). This size range is suitable for administration to a human patient by inhalation.") Pore size measures the holes or cavities within the matrix according to Daitch et al., and not the diameter of a particle. The two concepts are simply not related.

By this Amendment, claim 1 has been amended to specify that the composite material that is contacted with the supercritical fluid is a composite particle. This is clearly not taught or suggested by Daitch et al. Claim 1 has further been amended to clarify that the resulting porous structure is a particle having an aerodynamic size range of from about 0.5 to about 5 microns and a geometric volume diameter of from about 1 to about 20 microns. Again, this is not taught or suggested by Daitch et al. Daitch et al. teaches an aerogel that can be used to capture particles of this size, but not a way to obtain porous particles of this size. In view of the amendments made to claims 1, 3, 4, and 10, reconsideration of the rejection of such claims as being anticipated by Daitch et al. is respectfully requested.

Also in the prior Office Action, the Examiner rejected claim 7 under 35 U.S.C. §103(a) as being unpatentable over Daitch et al. as applied to claim 1 further in view of Chattopadhyay et al., U.S. Pub. Pat. App. No. US 2004/0156911, which the Examiner notes discloses the use of supercritical carbon dioxide to produce composite particles from an emulsion. Applicant notes that Daitch et al. fails to disclose contacting composite particles with any material to produce porous particles. And thus, even if one having skill in the art would have been motivated by Chattopadhyay et al. to use

supercritical carbon dioxide in the process according to Daitch et al. as suggested by the Examiner, the limitations of claim 7 would nonetheless not be met by the resulting combination. A *prima facie* case of obviousness simply cannot be made using the two references cited by the Examiner. Reconsideration of the rejection of claim 7 is thus respectfully requested.

In light of the foregoing, it is respectfully submitted that the present application is in a condition for allowance and notice to that effect is hereby requested. If it is determined that the application is not in a condition for allowance, the Examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present application.

If there are any additional fees resulting from this communication, please charge the same to Deposit Account No. 18-0160, Order No. FER-15618.001.001.

Respectfully submitted,

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